



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,202	08/31/2000	Sang-Seok Lee	8733-291-00	4707

30827 7590 11/29/2002

MCKENNA LONG & ALDRIDGE LLP
1900 K STREET, NW
WASHINGTON, DC 20006

EXAMINER

DUONG, THOI V

ART UNIT PAPER NUMBER

2871

DATE MAILED: 11/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/653,202

Applicant(s)

LEE ET AL.

Examiner

Thoi V Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 ~~is/are~~ pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 9 ~~is/are~~ rejected.
- 7) ☒ Claim(s) 5-7 and 10-12 ~~is/are~~ objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Related Art (Figs. 3 and 4) in view of Miwa et al. (USPN 6,317,186 B1).

As shown in Figs. 1, 3 and 4, Applicant's Related Art discloses a method of forming a liquid crystal display (LCD) panel, comprising the steps of:

- forming a common electrode on a first substrate;
- forming a plurality of conductive contact dots 10 on a second substrate;
- forming a seal pattern 2 on the second substrate, the seal pattern having a plurality of rectangular bent portions , wherein each portion circumvents a conductive contact dot 10, wherein the conductive contact dot comprises a silver (Ag);
(see Specification, page 4, line 22 through page 5, line 9)
- assembling the first substrate and the second substrate; and
- forming a liquid crystal layer between the first and second substrates, wherein the seal pattern is formed by a dispenser (see Specification, page 5, lines 17-21).

Applicant's Prior Art discloses a method of forming a LCD panel that is basically the same as that recited in claims 1-4, 8 and 9 except that the bent portion has a

Art Unit: 2871

rectangular shape. As shown in Fig. 7(b), Miwa discloses a method for applying a seal pattern 30 on a substrate 20 to realize a liquid crystal cell with large display region, the seal pattern having a plurality of U-shaped portions being bent toward an inside of the substrate, wherein each U-shaped portion circumvents a dot shaped sealing material 130. Accordingly, the U-shaped portion may have a shape of a semicircle or a shape of a triangle having all three vertexes rounded with a radius as clearly shown in Fig. 7(b). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Applicant's Related Art with the teaching of Miwa by forming a seal pattern having a plurality of triangle or semicircular bent portions circumventing a conductive contact dot so as to obtain an excellent display quality.

Allowable Subject Matter

3. Claims 5-7 and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

None of the prior art of record suggests or discloses alone or in combination that:

"a seal pattern has a plurality of triangular portions being bent toward an inside of the second substrate, wherein each triangular portion circumvents a conductive contact dot" in combination with "each triangular bent portion has rounded vertexes with a radius of 0.5 to 2 millimeters; a distance between a first vertex and a second vertex is 5 to 20 millimeters; and a distance between a conductive contact dot and a third vertex is 0.1 to 5 millimeters", and

"a seal pattern has a plurality of semicircular portions being bent toward an inside of the second substrate, wherein each semicircular portion circumvents a conductive contact dot" in combination with "each of the two ends of the semicircular bent portion has a radius of 0.5 to 2 mm; the semicircular portion has a radius of 2.5 to 10 millimeters; and a distance between a conductive contact dot and a semicircular portion is 0.1 to 5 millimeters".

The most relevant reference, USPN 6,317,186 B1 of Miwa et al., fails to disclose or suggest the above dimensions. The Miwa's reference only discloses a sealing pattern having a plurality of bent portions without any specific dimensions for the bent portion.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (703) 308-3171. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (703) 305-3492.

Application/Control Number: 09/653,202
Art Unit: 2871

Page 5

Thoi Duong

11/22/2002 *TSB*

TSB
ROBERT W. KIM
SUPERVISOR, PATENT EXAMINER
TECHNICAL CENTER 2500